Remarks

Entry of the amendments presented, reconsideration of the application as amended, and allowance of all pending claims are respectfully requested. Claims 1-25 remain pending.

Claims 1-25 are amended to more particularly point out and distinctly claim certain features of Applicants' invention. These amendments to the claims constitute a bona fide attempt by the Applicants to advance prosecution of this application and obtain allowance of certain claims and are in no way meant to acquiesce to the substance of the outstanding Office Action. No new matter is added to the application by any amendment presented.

More particularly, independent claims 1, 9, 17, and 18, are amended to recite "wherein the clock time of the first computer system and the clock time of the second computer system are unsynchronized." Support for this characterization can be found at page 5, lines 20-25, page 6, lines 8-11, and page 6, line 14 to page 7, line 7 of the specification (by way of example). Claims 2, 10, and 19 are amended to define the symbol "T4" as the "receiving time ... at the first computer system of a response packet sent by the second computer system". Support for the amended recitations of claims 2, 10, and 19 is provided by FIG. 2 and page 9, lines 6-19, for example.

35 U.S.C. §112 Rejection

The Office Action initially rejected claims 1-25 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In response, claims 1-25 are amended to provide a clear antecedent basis for the characterizations recited in these claims. Applicants respectfully submit that claims 1-25, as amended, have proper antecedent basis and, therefore, are in proper form. Also, claims 2, 10, and 19 are amended to define the symbol "T4". Applicants respectfully submit that claims 2, 10, and 19, as amended, satisfy the definiteness requirement of 35 U.S.C. §112.

35 U.S.C. §103(a) Rejection

The Office Action also rejected claims 1-25 under 35 U.S.C. §103(a), as being unpatentable over Fletcher et al. (U.S. Patent No. 6,321,264; hereinafter, "Fletcher"). Applicants respectfully, but most strenuously, traverse this rejection and request reconsideration thereof. The cited patent does not teach or suggest all of the elements of applicants' claimed invention as explained below and, therefore, does not render Applicants' invention obvious.

As stated in Applicants' specification, the present invention addresses the problem of determining packet traversal times in a computer communication network in which the clocks of the constituent computer systems are unsynchronized. (See e.g. p. 5, lines 20-25 of Applicants' specification.) Consequently, one aspect of Applicants' invention (recited in claim 1) is a method for determining packet traversal times in a computer network between a first computer system and a second computer system comprising "determining a clock time difference V between a clock time of the first computer system and a clock time of the second computer system using a statistical method, wherein the clock time of the first computer system and the clock time of the second computer system are unsynchronized." The difference between the clock time of the first computer system and the clock time of the second computer system, i.e., the "clock time difference V", reflects the asynchrony of the two clocks. The "clock time difference V" is used in the calculation of packet traversal time to reduce the error (due to the asynchrony of the two computer systems' clocks) in the estimation of packet transversal time by timestamp differences.

In contrast, the cited description in Fletcher is limited to calculating a packet traversal time in a network using the difference between timestamps applied to the packet at the time of transmission by a sending computer system and at the time of receipt by a receiving computer system. Fletcher does not teach or suggest determining an instantaneous clock time difference V between a clock time of the first computer system and a clock time of the second computer system. In Fletcher, the difference in timestamps measures the elapsed time between the occurrences of two events. This is different from Applicants' claimed determination of a clock time difference between the clocks of two computer systems, wherein a "clock time" of a computer system is the state of the computer system's clock at a particular instant of time.

Hence, "determining a clock time difference V between a clock time of the first computer system and a clock time of the second computer system" means determining a difference between the instantaneous states of the respective clocks of the two computer systems at a particular point in time. A difference between the states of two clocks at an instant in time is clearly different from the elapsed time determination of Fletcher. The distinction is further characterized by Applicants' recitation of calculating the request packet traversal time in claim 2 (for example). Here, the request packet traversal time is calculated as the sum of the elapsed time $(U2 - T1)$ between two events, which could be determined from a difference of timestamps in one embodiment, and the clock time difference V.

Applicants respectfully submit that Fletcher fails to teach or suggest at least Applicants' determining of an actual, instantaneous clock time difference V between a clock time of the first computer system and a clock time of the second computer system.
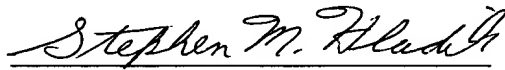
Moreover, Fletcher also does not teach or suggest determining such a clock time difference "wherein the clock time of the first computer system and the clock time of the second computer system are unsynchronized." In contrast to Applicants' now claimed invention, Fletcher does not address the problem of two or more computer systems of a network having asynchronous clocks. The patent is silent on this issue. However, Fletcher implicitly assumes that the clocks of the transmitting and receiving computer systems in the network are synchronized. This assumption is the basis for calculating the network delay by performing a subtraction of timestamps that have originated from different computer systems. If the instantaneous clock times of the system clocks that are used to create these timestamps on the different computer systems differ by a value X, the calculated network latency in Fletcher's system would be consequently erroneous by the value X. Fletcher does not describe any mechanism that compensates for such an error, which arises when the clocks of the computer systems are unsynchronized. Therefore, for this further reason, Applicants respectfully submit that their invention recited in amended claim 1, would not have been obvious to one of ordinary skill in the art in view of Fletcher.

For the reasons discussed above, Applicants respectfully submit that independent claim 1 recites patentable subject matter over the applied art, and since independent claims 9, 17, and 18

recite the same non-obvious features, Applicants respectfully submit that claims 9, 17, and 18 are patentable over the applied art for the same reasons. Also, since claims 2-8, 10-16, and 19-25 depend from the aforementioned claims and recite further features of the present invention, Applicants respectfully submit that these dependent claims are also patentable over Fletcher. Withdrawal of the rejection of claims 1-25 is respectfully requested, and allowance of these claims is respectfully solicited.

Should the Examiner wish to discuss this case with Applicants' attorney, please contact Applicants' attorney at the number listed below.

Respectfully submitted,

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